SOLODOVNIKOVA, L.F., inzh.

Making fibrous gypsum products. Biul.stroi.tekh. 12 no.10:12-
14 O '55. (MIRA 12:1)

1. TSentral'nyy institut informatsii po stroitel'stvu.
(Gypsum) (Decoration and ornament, Architectural)

SOLODOVNIKOVA, L.F., inzhener.

Making and assembling large brick blocks. Opyt stroi. no.5:3-26 '56. (MIRA 10:4)

(Building blocks)

SOLODOVNIKOVA L.F.

BRAND, V.E., inzh.; SOLODOVNIKOVA, L.F., inzh.

Designing one- and two-story houses made of KB pressed reed panels. Biul.stroi.tekh. 14 no.6:10-17 Je '57. (MIRA 10:11)

1. Kazgiprogorsel'stroy (for Brand). 2. TSentral'nyy nauchno-issledovatel'skiy institut stroitel'stva Akademii stroitel'stva i arkhitektury SSSR (for Solodovnikova).
(Kazakhstan--Architecture, Domestic) (Building blocks)
(Reed (Botany))

SOLODOVNIKOVA, L.F.

Frame gable houses built of reedwork panels. Biul. stroi. tekh. 14 no.12:37-42 D '57. (MIRA 11:1)

1. TSentral'nyy nauchno-issledovatel'skiy institut stroitel'stva Akademii stroitel'stva i arkhitektury SSSR.
(Kazakhstan--Architecture, Domestic--Designs and plans)
(Reed (Botany))

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

Ca

8

Barites of the radiferous mine at Tyuja-Mujun. L. L. Solodovnikova. *Trav. radium et minerais radioactifs acad. sci. U. R. S. S.* 3, 93-104(1928). The minerals of the successive veins in this mine are described.

H. L. D.

METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

19

The effect of lowigite upon clay and ceramic masses. V. T. Popova and L. L. Solodovnikova. *Trans. Ceramic Research Inst.* (Moscow) 1929, No 20, 151-71(in German 102-4).—Contamination of Tschassov-Jar clay by lowigite is common. The raw materials used for the tests were a Tschassov-Jar clay, lowigite sepd. therefrom and a Latnaja clay contg. no lowigite. Addn. to Tschassov-Jar clay of fine lowigite, even in quantities as small as 0.5% increases the porosity of the burned clay as shown by the microscope. Addn. of up to 1% lowigite has no notable effect upon burning shrinkage and water absorption. Addn. of up to 2% lowigite increases porosity notably, and pores can be seen by the naked eye. Addn. of up to 5% lowigite causes swelling of the clay articles, reduction of burning shrinkage and increased water absorption, which tendencies increase with 10% lowigite content. Addn of lowigite to Latnaja clay increases porosity less and gives no swelling of the clay, and also reduces burning shrinkage at 1300-1380°. The presence of lowigite in porcelain causes porosity directly proportional to the quantity present. In making ceramic elec. insulators the use of Tschassov-Jar clay must be avoided. E. M. Symmes

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND CODES

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH CODES

Ca

8

Investigation of the feldspar from pegmatites from North Kareliya. I. I. [illegible]. *Trav. inst. [illegible] crist. mineral.* No. 5, [illegible] (in German [illegible]). Microscopic and chem. analyses and [illegible] are calculated, and varieties of the feldspar described. Twenty-four references. [illegible]

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

Co

8

The spinel, corundum and titano-magnetite deposit in the Khakassiya region (Minusinsk district) in Siberia
S. K. Kurbatov and L. L. Solodovnikova. Trav. inst. Lomonosoff geochim. crist. mineral. No. 5, 133-21 (in German 122)(1935)
Microscopic and chem. analyses are given. The deposit contains spinel up to 60, corundum 4.5-50 and titano-magnetite (allotriomorphic-granular aggregate of magnetite and ilmenite) not over 45% of the total aggregate. Five references. A.A.F.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

CA

8

The feldspars of the Chibină tundra I. I. Sokolovnikova. *Trav. soc. naturalistes Leningrad* **66**, No. 1, 34-88(1937); *Chem. Zentr.* **1937**, II, 1160; cf. *C. A.* **32**, 1617⁸.—Mineralogical investigations of the feldspars of the tundra region indicated that their differences are due to differences in the compn. of the alk. gang. The K-Na feldspars originating from chibinite are composed of microcline perthite with about 19.5% perthitic albite (62% Na feldspar). The K-Na feldspars from pegmatites of the foyaite zone are similar although they contain still more (up to 40%) perthitic albite. On the other hand, feldspars of the pegmatite veins of mica-nephelite-syenite are Na-poor or pure K feldspars of the type of the cryptoperthites; they are not twinned and in optical axial angles are similar to the anorthoclases. W. A. Moore

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

SOLODOVNIKOVA, L.L.

Scapolites of the Glafirinskiy ore deposits, Khakass Autonomous Province. Uch.zap. LGU no.93:35-53 '48. (MIRA 10:10)

1.Mineralogicheskiy kabinet Leningradskogo gosudarstvennogo Universiteta.

(Khakass Autonomous Province--Scapolite)

SOLODOVNIKOVA, L.L.

Scapolite of Glafirinskiy mine of Khakassia. Uch.zap.Len.un no.188: 3-22 '55. (MLRA 9:8)

(Khakass Autonomous Province--Scapolite)

SOLODOVNIKOVA, L.L.

Genesis of scapolites. Uch.zap.LGU no.215:3-48 '57.
(MIRA 12:5)

(Scapolite)

BARABANOV, V.F., otv.red.; SOLODOVNIKOVA, L.L., otv.red.; BUSORGINA, N.I., red.; VODOLAGINA, S.D., tekhn.red.

[Mineralogy of postmagmatic processes] K mineralogii postmagmaticheskikh protsessov. Leningrad, 1959. 232 p. (MIRA 12:9)

1. Leningrad, Universitet.
(Mineralogy)

SOLODOVNIKOVA, L.L.

Feldspars from alkaline pegmatites of the Il'menskiye Mountains.
Uch. zap. LGU no.291:3-63 '60. (MIRA 13:7)
(Il'menskiye Mountains--Feldspar)

SOK[illegible] [illegible].

Feldspars of contact deposits in Khakassia. Min. i geokhim. no.1:107-114 '64. (MIRA 18:9)

4E2d

Consumption of reagents as a function of the volume of solution in a reactor for processing motion-picture films. 10 I. B. Blyumberg, G. Bolochnikova, and N. Solodovnikova. *Zhur. Priklad. Khim.* 30, 1016-21(1957).—The conditions which exist in a reactor for processing motion-picture films (colored and black and white) are generalized mathematically and experimentally to cover reactors in which useful and useless reactions occur simultaneously. Solns. flow from separate vessels at rates b_1 and b_2 into a reactor maintained at a const. level (const. vol. v) so that the effluent rate $b = b_1 - b_2$. The const. of the reaction rate of the useless reaction (oxidation of $Na_2S_2O_3$ by $K_3Fe(CN)_6$ of initial concn. c' g./l.) is given by $K = (bc - \alpha_1 - bk_1)/(k_1k_2v)$ and the consumption of either reagent in the useless reaction $\alpha_2 = Kk_1k_2v$ g./hr., where $c = (c'b_1)/b$, α_1 is the consumption of a reagent ($K_3Fe(CN)_6$) in a useful reaction (oxidation of Ag), and k_1 and k_2 are the concns. of $Na_2S_2O_3$ and $K_3Fe(CN)_6$ in the reactor (or effluent). These relations were corroborated experimentally; (a) the oxidation of $Na_2S_2O_3$ by $K_3Fe(CN)_6$, (b) oxidation of hydroquinone, and (c) oxidation of diethyl-*p*-phenylenediamine by O. In a, where no useful reactions occur and $\alpha_1 = 0$, α_2 for either reagent decreases as v increases. The effect of v on α_2 of either b or c is in the opposite direction but it is slight. K increases with v.

I. Bencowitz

20

SOLODOVNIKOVA, O.I.; GORDINSKIY, O.K.

Morphology of the fat body in autogenous female mosquitoes Anopheles bifurcatus at various stages of ontogenesis. Zool. zhur. 41 no.3: 391-396 Mr '62. (MIRA 15:3)

1. Department of Biology and Botany, Medical High School of Lvov.
(Lvov region--Mosquitoes) (Insects--Development)

KRDZHIYEVA, Lidiya; KRAVCHENKO, B. [translator]; KRAVCHENKO, Ye. [translator];
SOLODOVNIKOVA, T., red.; ISUPOVA, N., tekhn.red.

[Homemade preserves. Practical advice and recipes for making fruit preserves, salting, pickling, and preserving fruits, vegetables, and other products] Domashnie zagotovki; prakticheskie sovety-retsepty po izgotovleniiu varen'ia, solenii, marinadov, konservirovaniiu plodov, ovoshchei i drugikh produktov. Simferopol', Krymizdat, 1960. 208 p. (MIRA 13:8)
(Food--Preservation)

SHAKHBAZOV, V.G.; SOLODOVNIKOVA, V.S.

Hybridizing the Chinese tussah moth and the yamamai worm. Uch. zap. KHGU 84:51-63 '57. (MIRA 11:11)

1. Kafedra darvinizma i genetiki Khar'kovskogo gosudarstvennogo universiteta.

(Silkworm breeding)

LUKS, Yu.A.; SOLODOVNIKOVA, V.S.; SOKOLOV, S.Ya., red.

[Botanical garden] Botanicheskii sad. Tekst IU.A.Luksa i V.S. Solodovnikovoi. Pod red. S.IA.Sokolova. Moskva, Izd-vo Akad. nauk SSSR, 1959. 1 v. (unpaged, chiefly illus.) (MIRA 14:8)

1. Akademiya nauk SSSR. Botanicheskiy institut.
(Botanical gardens)

SOLODOVNIKOVA, V.S.

Distribution of weevils of the genus Apion (Curculionidae) in the steppes of the eastern Ukraine. Zool. zhur. 42 no.2:222-232 '63.
(MIRA 16:3)

1. Department of Entomology, State University of Kharkov.
(Ukraine—Weevils)

SOLODOVNIKOVA, V.V.

Dependence of lipid content in the liver on the temperature of the external environment. Trudy Semipal. med. inst. 2:132-136 '59. (MIRA 15:4)

1. Kafedra biokhimii Semipalatinskogo gosudarstvennogo meditsinskogo instituta (zav. kafedroy - kand.med.nauk K.I.Rusinova).

(LIVER) (LIPIDS) (TEMPERATURE--PHYSIOLOGICAL EFFECT)

SOLODOVNIKOVA, YE. G.

47

PHASE I BOOK EXPLOITATION SOV/6333

Bochkarev, V. V., ed.

Tekhnika izmereniye radioaktivnykh preparatov; sbornik statey (Techniques for the Measurement of Radioactive Preparations; Collection of Articles) Moscow, Gosatomizdat, 1962. 4600 copies printed.

Eds.: A. M. Smirnova and M. A. Smirnov; Tech. Ed.: S. M. Popova.

PURPOSE: This book is intended for specialists in nuclear instrumentation.

COVERAGE: The book is a collection of articles on recent developments in 1) measurement of the activity and 2) analysis of the composition of emissions of radioactive preparations. The methodology and apparatus used in these studies are described in detail. References are given at the end of each article.

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Card 1/[illegible] /

Techniques for the Measurement (Cont.)

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Golutvina, M. M., and M. A. L'vova. Preparation of Specimens for Measurement of the Activity From β-Emission 72

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Kononenko, A. M., V. A. Petrov, and V. Ye. Yakhontova. Dose Distribution Along the Axis of a β-Emitting Plane Disk 100

Bazhenov, V. A., V. V. Bochkarev, and T. N. Sokolova. Measurement of the Activity of Gaseous Preparations by Means of a Gas-Filled Counter 115

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Card 3/5

[illegible], I.Z.; [illegible], Ye.V.

Quality of a [illegible] pipe heated in [illegible] gas environment.
Gaz. prom. 9 no.4:21-25 '64. (MIRA 17:5)

PEKELIS, G.B., dotsent; KASATKIN, I.I.; ARONOV, I.Z., starshiy nauchnyy sotrudnik; PRESICH, G.A.; SOLODOVNIKOVA, Ye.N.; VINIK, I.A.; FUKSON, F.I.; LAGUNOVA, V.D., inzh.-khimik

Experience in the application of contact water heating.
Tekst. prom. 25 no.9:71-76 S '65. (MIRA 18:10)

1. Belorusskiy politekhnicheskiy institut (for Pekelis).
2. Glavnyy spetsialist Gosudarstvennogo komiteta Soveta Ministrov BSSR po koordinatsii nauchno-issledovatel'skikh rabot (for Kasatkin). 3. Nauchno-issledovatel'skiy institut sanitarnoy tekhniki UkrSSR (for Aronov). 4. Starshiy inzh. Nauchno-issledovatel'skogo instituta sanitarnoy tekhniki UkrSSR (for Presich, Solodovnikova). 5. Rukovoditel' gruppy Belpromproyekta (for Vinik). 6. Nachal'nik kotel'noy Minskogo kamvol'nogo kombinata (for Fukson). 7. Minskiy kamvol'nyy kombinat (for Lagunova).

NOVIKOV, A.I., SOLODOVSHCHIKOV, I.I., CHERPHYSHEV, V.I., otv.red.

[Collection of decrees and orders concerning labor for workers in railroad transportation] Sbornik postnovlenii i rasporiazhenii po trudu dlia rabotnikov zheleznodorozhnogo transporta. Moskva, Gos. transp. zhel-dor. izd-vo, 1946. 263 p. (MIRA 11:9)

1. Russia (1923- U.S.S.R.) Ministerstvo putey soobshcheniya.
   (Labor laws and legislation)
   (Railroads--Employees)

SUNTSOV, G.N.; SOLODOVSHCHIKOV, I. P.

Gasification of the Raychikhinsk coal of low heating value in semi-mechanized gas producers. Gas. prom. 6 no. 7:8-11 '61. (MIRA 17:2)

SOLODUKHA, Kh.N.

The **PNF**-2 mounted liquid manure apreader. Biul.tekh.-ekon.inform. no.11:55-56 '60. (MIRA 13:11)

(Fertilizer spreaders)

SOLODUKHA, P.A., inzhener.

Efficient fitting of gusher openings. Bezop.truda v prom. 1 no.9:32 S '57. (MIRA 10:9)

(Petroleum engineering)

SOLODUKHA, P.A.

Increase protective properties of work clothes. Bezop. truda v prom. 2 no.7:37 Jl '58. (MIRA 11:9)

1. Inzhener po tekhnike bezopasnosti nefteprornyslovogo upravleniya Pervomayneft'.

(Clothing, Protective)

SOLODUKHA, P.N., inzhener po tekhnike bezopasnosti.

Produce new motion pictures on safety measures. Bezop. truda v prom. 1 no.4:37 Ap '57. (MIRA 10:6)

1. Neftepromyslovoye upravleniya Pervomayneft'.
(Motion pictures in industry)

SOLODUKHIN, A.S., inzhener.

Experience in making wall blocks out of coarse porous concrete in construction yards. Bet. i zhel.-bet. no.8:279-282 [illegible] '55. (MLRA 9:1)

(Concrete blocks)

43133
S/181/62/004/011/036/049
B108/B102

AUTHORS: Gubkin, A. N., Kashtanova, A. M., Potapov, Ye. V., and Solodukhin, A. V.

TITLE: Nonlinear properties and phase transitions in strontium-bismuth titanates

PERIODICAL: Fizika tverdogo tela, v. 4, no. 11, 1962, 3293 - 3300

TEXT: Earlier work (FTT, 2, 12, 3077, 1960; 3, 4, 1110, 1961) in studying the nonlinear properties of the system $SrTiO_3-Bi_2O_3\cdot 3TiO_2$ is continued. The specimens had relaxation properties. The maxima of the ε and tan δ versus temperature curves are shifted to higher temperatures when the frequency of the field applied is increased. The dependences of ε and tan δ on the field strength, and the hysteresis loop, both have the same characteristics as those of ferroelectrics, but the characteristic jumps of ε associated with phase transitions do not occur. This fact supports the suggestion that the nonlinear properties may be caused by relaxation polarization, but low-temperature minima of the coefficient of linear expansion are indicative of phase transitions from the paraelectric into

Card 1/2

S/181/62/004/011/036/049
B108/B102

Nonlinear properties and phase...

the ferroelectric state at low temperatures. There are 7 figures.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR, Moskva
(Physics Institute imeni P. N. Lebedev AS USSR, Moscow)

SUBMITTED: June 4, 1962 (initially)
July 10, 1962 (after revision)

Card 2/2

L 23475-66 EWT(m)

ACC NR: AP6013979 SOURCE CODE: UR/0228/65/000/002/0005/0007

AUTHOR: Kiselev, D. P. (Chief designer); Solodukhin, I. A. (Chief engineer); Mironov, A. A. (Chief); Gol'dberg, G. S. (Chief engineer)

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B

ORG: [Kiselev] Lightweight Concrete Department, Bureau of Installation, NIIZHB (Sektor legkikh betonov Byuro vnedreniya NIIZHB); [Solodukhin] Bureau of Installation, NIIZHB (Byuro vnedreniya NIIZHB); [Mironov] Department of Economic Research, NIIZHB (Otdel economicheskikh issledovaniy NIIZHB)

5

TITLE: Industrial manufacture of protective structures made of air-entrained concrete

SOURCE: Stroitel'nyye materialy, no. 2, 1965, 5-7

TOPIC TAGS: reinforced concrete, concrete, heat insulation, centrifugal pump

ABSTRACT: The article describes the efforts made by the Scientific Research Institute of Reinforced Concrete and other agencies to make practical use of steam-cured, porous-clay, air-entrained concrete as heat insulation panels for building faces, roofs, etc. Most local clays expand insufficiently under heat and therefore form a rather heavy aggregate, 500 to 700 kg/m^3, yielding concrete weighing 1200 to 1400 kg/m^3, which is 300 to 400 kg too heavy for standard structures.

The Institute has developed a lightweight insulating material using expanded clay aggregate and foam, but no sand. This material has been extensively reported in the literature. Such light-weight concrete can be rather easily prepared, using standard centrifugal pumps to produce the foam.

Card 1/2 UDC: 666.973.2-411

L 23475-66

ACC NR: AP6013979

Initially, bearing wall panels were successfully made by this technique and used for six five-story buildings. Panel thickness in another case was decreased by 20% and weight by 30%. Since then, 18 5-story apartment houses of 80 units each have been built with such prefab foam concrete panels.

The somewhat greater use of cement is repaid several times by the savings in aggregate and sand. Monolithic panels are used instead of double-layered structures. Savings and costs are discussed, and several building agencies switching to the new panels are mentioned. [JPRS]

SUB CODE: 13 / SUBM DATE: none

Card 2/2 do

KISELEV, D.P.; SOLODUKHIN, I.A.; MIRONOV, A.A.; GOL'DBERG, G.S.

Industrial production of enclosing elements made of expanded clay foam concrete. Stroi. mat. 11 no.2:5-7 F '65. (MIRA 18:3)

1. Glavnyy konstruktor sektora legkikh betonov Byuro vnedreniya Nauchno-issledovatel'skogo instituta betona i zhelezobetona (for Kiselev). 2. Glavnyy inzh. Byuro vnedreniya Nauchno-issledovatel'skogo instituta betona i zhelezobetona (for Solodukhin). 3. Glavnyy inzh. domostroitel'nogo kombinata tresta No.18 g. Izhevska (for Gol'dberg).

[illegible], N. P.; KOLO[illegible], Ya. D.

Forest Fires - Soviet Far East

Classification of burned areas in the Far East, Les. khoz. 6, No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

USSR / Forestry. Forest Management. X

Abs Jour: Ref Zhur-Biol., No 7, 1958, 29547.

Author : Solodukhin , Ye. D.
Inst : The Far Eastern Institute for Forestry.
Title : The Problem of Classifying the Forest Glades in the Spruce and Fir Forests of the Far East With Regard to Their Renewal.
(K voprosu o klassifikatsii lesosek yelovo-pikhtovykh lesov Dal'nego vostoka v svyazi s vozobnovleniyem).

Orig Pub: Byul. nauchno-tekhn. inform. Dal'nevost. n.-i. in-ta lesn. kh-va, 1957, No 3, 12-18.

Abstract: No abstract.

Card 1/1

K

Country : USSR
Category: Forestry. Forest Management

Abs Jour: RZhBiol., No 11, 1958, No 48736

Author : Solov'yev, K.P.; Solodukhin, Ye. D.
Inst : -
Title : Forest Restoration on Burns in the Coniferous - Broad-Leaf Forests of the Far East.

Orig Pub: Sb. rabot po lesn. kh-vu, M.-L., Goslesbumizdat, 1957, 5-12

Abstract: This article gives a classification scheme of the burns in the coniferous - broadleaf forests of the Far East. With regard to the seeding sources, the burns are divided into 2 groups, and with regard to the condition of the remains of the tree stand and the general trend in the process of na-

Card : 1/2

K-25

SOLODUKHIN, Ye.D.

Reproduction by stump suckers in some Far Eastern trees. Bot. zhur. 44 no.9:1314-1324 S '59. (MIRA 13:2)

1. Primorskaya lesnaya opytnaya stantsiya, Primorskiy kray, stantsiya Okeanskaya.
(Soviet Far East--Afforestation)

SOLODUKHIN, Ye.D.

Features of spruce and larch growth in larch-spruce forests of the Kentsukhe River basin. Soob.DVFAN SSSR no.13:79-85 '60.
(MIRA 14:3)

1. Primorskiy sel'skokhozyaystvennyy institut.
(Kentsukhe Valley—Coniferae)

SOLODUKHIN, Ye.D.

Planting oak in clusters in the Maritime Territory. Agrobiologia
no.4:630 Jl-Ag '63. (MIRA 16:9)

1. Primorskiy sel'skokhozyaystvennyy institut, g. Ussuriysk.
(Maritime territory--Oak)

SOLODUKHIN, Ye.L.

More on the causes of crown-splitting in the Korean pine. Bot. zhur. 49 no.9:1344-1345 S '64. (MIRA 17:12)

1. Primorskiy sel'skokhozyaystvennyy institut, Ussuriysk.

SOLODUKHO, Isaak Gertsovich

For the Question about the Influence of Very High Frequency on the Breaks of (anafilaksii)

Dissertation for candidate of a Medical Science degree, Kharkov Military-Surgeon Assistant School, 1944

17(

AUTHORS: Mizinov, N.N., Frolov, [illegible]
of the Medical Corps, [illegible]
Yerukhimov, N.L., Colonel [illegible]
M.F., Lieutenant-Colonel [illegible]

TITLE: Working Experience in [illegible]
and Rendering First Aid [illegible]

PERIODICAL: Voyenno-meditsinskiy zh[illegible]

ABSTRACT: The authors give a [illegible]
for wounded soldiers [illegible]
compared with similar [illegible]
of time necessary to [illegible]
by 40%, while 30% of th[illegible]
percentage of the missed [illegible]
times above the pertinent [illegible]
suggested that the [illegible]
creased and equipped with [illegible]

[illegible]

Working Experience [illegible]
First Aid to [illegible]

Card 2/2

[illegible]

[illegible], I. S. "The vibration of the contact system of an electromagnetic contactor when switched on", Sbornik nauch.-tekh. st. [illegible] elektrotekhn. in-ta, Issue 7, 194[illegible], s. 1[illegible]2-[illegible].

SO: U-3042, 11 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 12, 1949).

SOLODUKHO, M. G.

USSR/Geology - Kazan' Deposits 1 Jun 53

The Upper Kazan' Deposits in the Central Part of the Volga-Kama Region," B. V. Selivanovskiy and M. G. Solodukho, Kazan' State U

DAN SSSR, Vol 90, No 4, pp 639-642

Present a scheme of the territorial distribution of the zone of phase development of the formation of Kazan' deposits. Presented by Acad S. I. Mirinov 18 Mar 53

254T68

15-1957-3-2615

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 3, p 8 (USSR)

AUTHORS: Selivanovskiy B. V., Solodukho, M. G., Gusev, A. K.

TITLE: The Biostratigraphy of the Upper Permian Rocks of Western Tatariya and the Adjoining Regions (Biostratigrafiya verkhnepermskikh otlozheniy zapada Tatarii i smezhnykh rayonov)

PERIODICAL: Uch. zap. Kazansk gos. un-ta, 1955, Vol 115, Nr 10, pp 117-121

ABSTRACT: In the section of lower Kazan' rocks of the Vyatka ridge, five lithologically well-defined "formations" are distinguished. A meager group of fossils is found in these beds along the Northern Dvina and Pinega Rivers. The typical forms are *Spirifer blasii* Vern., *S. curvirostris* Vern, and *Productus tenuituberculatus* Barb. These mark two stages in the rise of brachiopod populations. The later one was the larger. Several formations may be noted in the lower Kazan' subgroup to the south, but

Card 1/2

SOLODUKHO, M.G.

Viktor Alekseevich Cherdyntsev; obituary. Uch.zap.Kaz.un. 115 no.16:267-273 '56. (MLRA 10:3)

1. Starshiy prepodavatel' kafedry paleontologii i istoricheskoy geologii.
(Cherdyntsev, Viktor Alekseevich, 1882-1954)

SOLODUKHO, V.B., inzhener.

Standard plans of some buildings of coke-chemical plants.
Stroi.prom.32 no.2:14-18 F '54. (MLRA 7:2)

1. Khar'kovskoye otdeleniye Promstroyproyekta. (Coke industry)

SOLODUKHO,V.B., inzhener

Building coal retorts for coke by-product platns. Stroi.prom. 33 no.7:4-6 Jl '55. (MIRA 8:9)
(Coke industry) (Reinforced concrete construction)

Vsesoyuznoye ob"yedinennoye soveshchaniye po avtomatizatsii proizvodstvennykh protsessov v mashinostroyenii i avtomatizirovannomu elektroprivodu v promyshlennosti. 3d, Moscow, 1959

Elektroprivod i avtomatizatsiya promyshlennykh ustanovok; trudy soveshchaniya (Electric Drive and Automation in Industrial Systems; Transactions of the Conference) Moscow, Gosenergoizdat, 1960. 470 p. 11,000 copies printed.

General Eds.: I.I. Petrov, A.A. Sirotin, and M.G. Chilikin; Eds.: I.I. Sud, and N.F. Silayev; Tech. Eds.: K.P. Voronin, and G.Ye. Larionov.

PURPOSE: The collection of reports is intended for the scientific and technical personnel of scientific research institutes, plants and schools of higher education.

COVERAGE: The book is a collection of reports submitted by scientific workers at plants, scientific institutes and schools of higher education at the third Joint All-Union Conference on the Automation of Industrial Processes in Machine Building and Automated Electric Drives in Industry held in Moscow on May 12-16, 1959. The Conference was called by the Academy of Sciences USSR, the Gosplan SSSR (State Planning Commission USSR), the GNTK SSSR, the Gosudarstvennyy Komitet po avtomatizatsii i mashinostroyeniyu (State Committee on Automation and Machine Building) and the Natsional'nyy Komitet SSSR po avtomaticheskomu upravleniyu (USSR National Committee on Automatic Controls) and prepared by the Nauchno-tekhnicheskiy komitet po avtomatizirovannomu elektroprivodu (Scientific and Technical Committee on Automated Electric Drives), the MEI (Moscow Institute of Energetics), the TNIIKM, the IAT (Institute of Automation and Telemechanics) of the Academy of Sciences USSR, and the Komissiya po tekhnologii mashinostroyeniya Instituta mashinovedeniya AN SSSR (Commission on the Technology of Machine Building of the Institute of Science of Machines of the Academy of Sciences USSR). It was the purpose of the Editorial Board to arrange the reports in a way which would ensure a relatively systematic presentation of theoretical and practical problems relating to electric drives and automatic controls of industrial mechanisms used in various branches of industry. Basic problems of automated electric drive and their solution are outlined. The book also contains articles on electric machinery and means of automation. Considerable attention is paid to noncontact automatic control systems, including systems with semiconductor devices and magnetic amplifiers, and to computers intended both for the analysis and the synthesis of linear and nonlinear automatic regulation and control systems. Reports already published in journals or official publications have been considerably abbreviated; those which have appeared in volume V of MII EP transactions or in the journal "Elektrichestvo" are marked with an asterisk. No personalities are mentioned. References accompany some of the papers.

PART I. GENERAL PROBLEMS CONCERNING THE THEORY AND PRACTICE OF ELECTRIC DRIVE AND AUTOMATION OF CONTROL

Syromyatnikov, I.A., Professor, Doctor of Technical Sciences. Selection of Energy Parameters for Electric Equipment and Electric Drives 176

Artobolevskiy, I.I., Professor, Doctor of Technical Sciences. Drives as Basic Structural Components of Modern Machinery 183

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PART II. ELECTRIC DRIVES OF METALLURGICAL INSTALLATIONS

Tishchenko, N.A., Engineer. Problems of Metallurgical Electric Drives During the Current Seven Years 190

Druzhinin, N.N., Candidate of Technical Sciences. Investigation of Multimotor Electric Drives for Continuous Mills Taking the Elasticity of Machinical Links Into Account 195

Olefir, F.F., Candidate of Technical Sciences. Application of New Electric Drives for Continuous Rolling Mills 202

Solodukho, Ya.Yu., Engineer. High-Speed Automatic Control for the Main Electric Drives of a Continuous Rolling Mill 208

Dralyuk, B.N., Engineer. Concerning the Adjustment of Electric Drives of Continuous High-Speed Cold-Rolling Mills* 213

Sleshanovskiy, O.V., Candidate of Technical Sciences. Optimum Parameters and the Structure of Electric Drive Systems for Reversing Mills 214

Arkhangel'skiy, V.I., Engineer. Electric Drive Systems of Reversing Rolling Mills 214

Shumberg, Ya.I., Candidate of Technical Sciences. Selection of Power and Type of Rolling Mill Electric Drives 218

Gendel'man, B.R., Engineer. Main Drives Without Flywheels for Reversing Rolling Mills 221

ACC NR: AP6012116 (A, N) SOURCE CODE: UR/0413/66/000/007/0028/0028

AUTHORS: Solodukho, Ya. Yu.; Dobrynin, Ye. V. 12

ORG: none

TITLE: Converter apparatus. Class 21, No. 180243 [announced by State Design Institute "Tyazhpromelektroproyekt" (Gosudarstvennyy proyektnyy institut)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 7, 1966, 28

TOPIC TAGS: semiconductor rectifier, controlled rectifier

ABSTRACT: This Author Certificate presents a converter apparatus consisting of a power rectifier bridge containing a group of controlled and a group of uncontrolled rectifiers. There is an additional bridge with a capacitive filter at the output to protect the power rectifiers from overvoltages occurring in the network. To simplify the device, the group of uncontrolled rectifiers of the power bridge is used as one group of rectifiers of the additional bridge (see Fig. 1).

Card 1/2 UDC: 621.314.632:621.316.93

L 08993-67

ACC NR: AP6012116

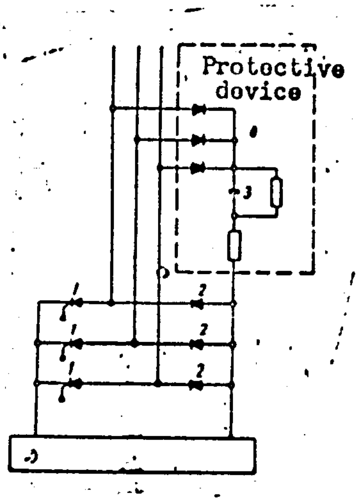

Fig. 1. 1 - controlled rectifiers of power bridge;
2 - uncontrolled rectifiers of power bridge;
3 - capacitive filter; 4 - additional bridge

Orig. art. has: 1 diagram.

SUB CODE: 09/ SUBM DATE: 26Jan65

2/2 nst

PHASE I BOOK EXPLOITATION SOV/3877

Solodukho, Yakov Yudelevich

Avtomatika elektroprivodov nepreryvnykh stanov goryachey prokatki (Automation of Electric Drive Systems for Continuous Hot-Rolling Mills) Moscow, Metallurgizdat, 1960. 112 p. Errata slip inserted. 3,150 copies printed.

Ed.: A.A. Sheynman; Ed. of Publishing House: T.I. Kiseleva; Tech. Ed.: P.G. Islent'yeva.

PURPOSE: The book is intended for designers, setup men, and rolling-mill operators. It may also be used by students of tekhnikums and institutes studying electrical equipment for rolling mills.

COVERAGE: Methods of selecting parameters of motors and speed regulators for continuous hot-rolling mills are explained. Modern types of speed regulators with magnetic and electronic amplifiers and grid-control systems for mercury-arc rectifiers are described. Results of testing and adjustment of modern speed regulators are presented. The tests were made in 1957-58 by the

Card 1/5

Automation of Electric Drive Systems (Cont.) SOV/3877

Gosudarstvennyy proyektnyy institut Tyazhpromelektroproyekt (State Institute of Planning and Design, Tyazhpromelektroproyekt), in the laboratory of the Moskovskiy energeticheskiy institut (Moscow Institute of Energetics), and on the 350 continuous rolling mill of the Makeyevskiy metallurgicheskiy zavod (Makeyevka Metallurgical Plant). The author thanks the editor, A.A. Sheynman, Engineer, and B.A. Levitanskiy, Engineer, for their assistance and advice. There are 69 references: 49 Soviet, 17 English, and 3 German.

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Ch. I. Conditions of Rolling 5
  1. Types of continuous rolling mills 5
  2. Basic conditions for continuous rolling 7
  3. Rolling with looping 9
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  5. Characteristic features of rolling on continuous mills 12
  6. Group and individual drive of rolling-mill stands 15

Card 2/5

SOLODUKHO, Ya. Yu.

SHOR, Emmanuil Romanovich. Prinimali uchastiye: GRANOVSKIY, S.P., kand.tekhn. nauk; SON'KIN, M.A., kand.tekhn.nauk; SOLODUKHO, Ya.Yu., inzh.; KOZLOV, B.N.; POLUKHIN, P.I., prof., doktor tekhn.nauk, retsenzent; KOROLEV, A.A., red.; OZERETSKAYA, A.L., red.izd-va; ISLENT'YEVA, P.G., tekhn.red.

[New rolling mill processes] Novye protsessy prokatki. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1960. 385 p. (MIRA 13:1)

1. Gosudarstvennyy proyektnyy institut Tyazhpromelektroproyekt (for Solodukho).
(Rolling (Metalwork))

ANASTASIYEV, F.I.; BROSTREM, A.A.; VESHENEVSKIY, S.N.; GEL'MAN, G.A.; GORNSHTEYN, L.A.: ZIMENKOV, M.G.; KARVOVSKIY, G.A.; KIBLITSKIY, V.A.; KLEYN, P.N.; KLIMIKSEYEV, V.M.; KLYUYEV, S.A.; KNORRING, G.M.; KORENEVSKIY, A.N.; LEYBZON, Ya.I.; LIVSHITS, D.S.; LIGERMAN, I.I.; LOGINOV, O.I.; MILICH, M.B.; NAYFEL'D, M.R.; OKOROKOV, S.P.; POLYAK, A.B.; ROYZEN, S.S.; RYABOV, M.S.; SINITSYN, O.A.; SOLODUKHO, Ya.Yu.; SOSKIN, E.A.; STASYUK, V.N.; BOL'SHAM, Ya.M., red.; GRACHEV, V.A., red.; SAMOVER, M.L., red.; BORICHEV, I. Ye., red.; DANILENKO, A.I., red.; KHRAMUSHIN, A.M., red.; YAKUBOVSKIY, F.B., red.; BRENDENBURGSKAYA, E.Ya., red.; KOMAR, M.A., red.; BORUNOV, N.I., tekhn. red.

[Handbook on electrical systems of industrial enterprises in four volumes] Spravochnik po elektroustanovkam promyshlennykh predpriiatii v chetyrekh tomakh. Pod obshchei red. I.E. Bricheva i dr. Moskva, Gosenergoizdat. Vol.1. [Design of electrical systems of industrial enterprises in two parts] Proektirovanie elektroustanovok promyshlennykh predpriiatii v dvukh chastiakh. Pt.2. Pod red. IA.M.Bol'shama i dr. 1963. 598 p. (MIRA 17:3)

VESHENEVSKIY, S.N.; SOLODUKHO, Ya.Yu.; TSALLAGOV, A.P.;
ZAMARAYEV, B.S.; VOLKOV, A.F. (Moskva); NIKULIN, G.F.;
LARKIN, A.P.

Exciter for electrical machines using thyristors. Elektrichestvo no.2:74-77 F '64. (MIRA 17:3)

1. Gosudarstvennyy institut po proyektirovaniyu elektrooborudovaniya dlya tyazheloy promyshlennosti (for Veshenevskiy, Solodukho, TSallagov, Zamarayev). 2. Metallurgicheskiy zavod "Serp i molot" (for Nikulin, Larkin).

24.2400 (1160, 1395, 1482)

[illegible]
B104/B205

AUTHORS: Kononov, B. P., Rukhadze, A. A., and Solodukhov, G. V.

TITLE: The electric field of an emitter in a plasma located in an external magnetic field

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 5, 1961, 565-573

TEXT: A study has been made of the electric field in the neighborhood of an emitter in a plasma located in an external field. Measurements were done with the use of two antennas and a single h-f probe. The electric field of a point dipole can be described by

$$\mathbf{E} = -\frac{q}{2\pi^2}\int d\mathbf{k}\,\frac{\mathbf{k}(\mathbf{kd})\,e^{i\mathbf{kr}}}{k_i\varepsilon_{ij}(\omega)\,k_j}, \qquad (1)$$

where r is the radius vector of the observation point. Neglecting ion motion and particle collisions, the tensor $\varepsilon_{ij}(\omega)$ can be written as

$$\varepsilon_{ij}(\omega) = \begin{pmatrix} \varepsilon_1 & ig & 0 \\ -ig & \varepsilon_1 & 0 \\ 0 & 0 & \varepsilon_2 \end{pmatrix}, \qquad (2)$$

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The electric field...

where

$$\varepsilon_1(\omega)=1-\frac{\omega_e^2}{\omega^2-\omega_{He}^2}, \quad \varepsilon_2(\omega)=1-\frac{\omega_e^2}{\omega^2},$$

$$g=\frac{\omega_e^2\omega_{He}}{\omega\left(\omega^2-\omega_{He}^2\right)}, \quad \omega_e^2=\frac{4\pi ne^2}{m_e}, \quad \omega_{He}=\frac{eH}{m_e c}.$$

In an appendix, it is exactly shown that

$$\left.\begin{array}{ll} E_z=0, \quad \frac{E_\perp}{E_0}=\frac{1}{\varepsilon_1(\omega)}\sqrt{\frac{\varepsilon_1(\omega)}{\varepsilon_2(\omega)}} & \text{при } \frac{\varepsilon_1}{\varepsilon_2}>0, \\ E_z=E_\perp=0 & \text{при } \frac{\varepsilon_1}{\varepsilon_2}<0. \end{array}\right\} \qquad (3)$$

holds at $\vec{r}\perp oz$ and $\vec{d}\parallel oz$, while

$$E_z=0, \quad \frac{E_\perp}{E_0}=\frac{\varepsilon_2(\omega)}{\varepsilon_1^2(\omega)}. \qquad (4)$$

is valid for $\vec{r}\parallel oz$ and $\vec{d}\perp oz$. In these relations, E_0 indicates the amplitude of the electric field of the dipole in a vacuum; E_z and $E_\perp$ are the amplitudes of the h-f field in the plasma. In the case of weak magnetic fields ($\omega_{He}\ll\omega$), (3) agrees with (4), and $E_\perp/E_0$ as a function of

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The electric field...

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density becomes infinite at one point. At $\omega = \omega_e$ the electric field in the plasma as a function of density becomes infinite with the exception of $\vec{r} \parallel oz$, $\vec{d} \perp oz$ and $\omega_{He} > \omega$, where resonance is absent. The field strength $\vec{E}$ as a function of the field strength of the external magnetic field is of great interest with a fixed plasma density. These properties of an electric field in plasma have been studied with the aid of an arrangement shown in Fig. 3. At a pressure of $2 \cdot 10^{-2}$ mm Hg (air), a gas discharge was produced between two electrodes in a glass flask 4 mm in diameter and 18 mm long. Transmitting and receiving antennas were inserted from both sides (spacing: about 3 mm). The antennas were made of coaxial cables. In first approximation, the transmitting antenna constituted an emitter which could be considered a dipole oriented along the axis of the cable. The frequency applied was $\omega = 5.7 \cdot 10^{10}$ sec^{-1}, and the receiving signal was amplified and conveyed to an oscilloscope. The solenoid generated a magnetic field of 7000 oe in the discharge tube. The authors studied the resonance of an electric field at small plasma densities, which had been produced by a discharge current of about 1 ma.

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The electric field...

Fig. 8 shows the electrical diagram of the single h-f probe. A comparison between experimental and theoretical results indicates that, in accordance with theory, resonance will occur at $\varepsilon_2(\omega) = 0$ only if the dipole moment of the emitter has a definite orientation with respect to the magnetic field. The experimental density required is slightly different from the theoretical one. This is due to the varying input resistance of the antennas, which complicated the experiments considerably. The authors further examined the possibility of measuring the plasma density with the use of a single h-f probe. This method is based on the dependence of the resonance of the input resistance of the dipole on the plasma density. It could be shown that this method is applicable to both isotropic and anisotropic plasma. There are 9 figures and 6 references: 4 Soviet-bloc and 2 non-Soviet-bloc.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Moskva (Institute of Physics imeni P. N. Lebedev, Moscow)

SUBMITTED: June 6, 1960

Card 4/6

L 27872-66 EWT(l)/ETC/EPF(n)-2/EWG(m)/EPA(w)-2 IJP(c) AT

ACC NR: AP5026704 SOURCE CODE: UR/0141/65/008/005/0893/0898

44,55 44,55

AUTHOR: Permyakov, V. A.; Solodukhov, V. V.

14
B

ORG: Moscow Power Engineering Institute (Moskovskiy energeticheskiy institut)

44,55

TITLE: Surface impedance of a nonhomogeneous plasma with sharply varying parameters

SOURCE: IVUZ. Radiofizika, v. 8, no. 5, 1965, 893-898

21,44,55

TOPIC TAGS: permittivity, inhomogeneous plasma, electric impedance

ABSTRACT: The surface impedance of a plasma as a function of the structure of the incident field, i.e., the spatial dispersion of surface impedance, is considered. It is assumed that the permittivity gradient is a sufficiently large quantity, so that the field in the nonhomogeneous layer may be represented as a series in reciprocal powers of a large parameter. From a physical standpoint, the condition of a large gradient means that the discussion is restricted to a strong skin effect in the inhomogeneous layer. Impedances of a half-space nonhomogeneous along the normal to the surface and of a sphere inhomogeneous along the radius are considered. The incident field in the first problem is given in the form of a plane wave, and in the

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second problem, in the form of a spherical wave; the two cases of polarization are treated separately. The results obtained permit the solution of various problems of external excitation of nonhomogeneous plasma bodies (such as nonhomogeneous layer or sphere) at large permittivity gradients. The method used to calculate the external field is also used in problems involving excitation of homogeneous bodies, except for the fact that the impedances of homogeneous bodies are replaced by the impedances of the corresponding nonhomogeneous bodies. Orig. art. has: 4 figures and 15 formulas.

SUB CODE: ME/ SUBM DATE: 24Dec64/ ORIG REF: 003/ OTH REF: 000

Card 2/2

ROZOV, Serafim Vasil'yevich, prof.; SOLODUN, G.A., red.

[Course in mechanical drawing] Kurs tekhnicheskogo chercheniia. Kiev, Gossel'khozizdat USSR, 1963. 182 p.
(MIRA 17:3)

YASTREBOV, Oleg Ivanovich; SOLODUN, G.A., red.; YEROSHENKO, T.G.,
tekhn. red.

[Laboratory work in electrical engineering and the principles of electronics] Laboratornye raboty po elektrotekhnike i osnovam elektroniki. Kiev, Gossel'khozizdat USSR, 1963. 309 p. (MIRA 16:8)
(Electronics) (Electric engineering)

YAROSHENKO, Petr Nikoforovich; YAROSHENKO, Lyubov' Alekseyevna [IAroshenko, L.O.]; SOLODUN, G.A.[Solodun, H.A.], red.

[Practical exercises with agricultural machinery and implements and their repair] Praktychni zaniattia z sil's'kohospodars'kykh mashyn i znariad' ta ikh remontu. Kyiv, Derzhsil'hospvydav URSR, 1963. 370 p. (MIRA 17:3)

ZORIN, Vladimir Petrovich; SOLODUN, G.A., red.

[Arithmetic in construction] Arifmetika po stroitel'nomu delu; sbornik pravil, primerov i zadach. Kiev, Gossel'khozizdat USSR, 1963. 251 p. (MIRA 16:5)
(Arithmetic)

KOVALETS, Martyn Nikonorovich; ATAMANOV, Vladimir Savel'yevich;
SOLODUN, G.A., red.; NEMCHENKO, I.Ye., tekhn. red.

[Technology and organization of rural construction]
Tekhnologiia i organizatsiia sel'skogo stroitel'stva.
Kiev, Gossel'khozizdat USSR, 1963. 440 p.
(MIRA 17:3)

DIDENKO, Nikolay Kirillovich; SOLODUN, G.A. [[redacted]], red.

[Operation of machines and tractors] Ekspluatatsiia mashynno-traktornoho parku. Kyiv, Urozhai, 1964. 507 p.
(MIRA 18:8)

KINSHAKOV, A.I.; SOKHRANOV, N.N.; SOLODUNOV, A.I.

Four-electrode tool used in electric logging. Prikl.geofiz. no.30:215-228 '61. (MIRA 14:10)

(Electric prospecting)

SOLODUNOV, A.M.; KOLCHANOV, B.A.

Reason for the establishment of check points for a.c. powered locomotives. Elek. i tepl. tiaga 5 no.3:40-41 Mr '61. (MIRA 14:6)

1. Chlen initsiativnoy gruppy vneshtatnykh korrespondentov zhurnala "Elektricheskaya i teplovoznaya tyaga", master elektromashinnogo tsekha, depo Krasnoyarsk (for Solodunov). 2. Master tsekha pod"yemochnogo remonta, depo Krasnoyarsk (for Kolchanov).
(Electric locomotives--Testing)

SOLODUNOV, A.M., master; GARATS, V.N., starshiy inzh.; KOLCHANOV, B.A., master

Special features in the maintenance of the mechanical section of the N60 electric locomotive. Elek. i tepl. tiaga 5 no.8: 33-35 Ag '61. (MIRA 14:9)

1. Chlen initsiativnoy gruppy vneshtatnykh korrespondentov zhurnala "Elektricheskaya i teplovoznaya tyaga" (for Solodunov).
(Electric locomotives)

SOLODUNOV, A.M., master elektromashinnogo tsekha; GARATS, V.N., inzh.

Maintenance and repair of the N60 electric locomotive traction engines.
Elek.i tepl.tiaga 6 no.1:11-12 Ja '62. (MIRA 15:1)

1. Depo Krasnoyarsk; chleny initsiativnoy gruppy vneshtatnykh
korrespondentov zhurnala "Elektricheskaya i teplovoznaya tyaga".
(Electric railway motors--Maintenance and repair)

SOLODUNOV, Aleksandr Mikhaylovich; PRISHCHEPO, P.T., inzh., retsenzent; OZEMBLOVSKIY, Ch.S., inzh., red.; BOBROVA, Ye.N., tekhn. red.

[Repair and maintenance of the auxiliary machines of a.c. locomotives] Remont i soderzhanie vspomogatel'nykh mashin elektrovozov peremennogo toka. Moskva, Transzheldorizdat, 1963. 72 p. (MIRA 16:12)

(Electric locomotives--Maintenance and repair)

GARATS, V. [illegible]; [illegible]; [illegible]
Z[illegible], S.N., [illegible]; red.

[Maintenance and depot repair of the mechanical section of a.c. locomotives] Soderzhanie i depovskoi remont mekhanicheskoi chasti elektrovozov peremennogo toka. Moskva, Transport, 1965. 90 p. (MIRA 18:2)

1. Glavnyy inzhener lokomotivnogo depo Krasnoyarsk Vostochno-Sibirskoy zheleznoy dorogi (for Soledunov). 2. Master tsekha lokomotivnogo depo Krasnoyarsk Vostochno-Sibirskoy zheleznoy dorogi (for Gar[illegible]).

L 08317-67 EWT(m)/EWP(j) RM

ACC NR: AR6033779 SOURCE CODE: UR/0058/66/000/007/D080/D080

33

AUTHOR: Grebenshchikov, D. M.; Solodunov, V. V.

TITLE: Triplet-triplet absorption spectra of some aromatic hydrocarbons

SOURCE: Ref. zh. Fizika, Abs. 7D638

REF SOURCE: Tr. 1-y Mezhvuz. konferentsii ped. in-tov po radiofiz. i spektroskopii. M., 1965, 20-23

TOPIC TAGS: absorption spectrum, aromatic hydrocarbon, hydrocarbon, triplet triplet absorption, phosphorescence spectrum, triplet molecule

ABSTRACT: Absorption spectra were obtained for excited phenanthrene, triphenylene, and diphenyl molecules in n-hexane, n-heptane, and n-octane solutions, frozen at 77K to study the effect of triplet-triplet absorption on quasi-line phosphorescence spectra. The effect of T—T absorption on phosphorescence spectra was also studied from the point of view of over-absorption of light radiated by triplet molecules. [Translation of abstract]

SUB CODE: 20/

Card 1/1 nst

L 2816-66 EWT(l)/EWT(m)/EPF(c)/EWP(j) IJP(c) RM
ACCESSION NR: AP5016183 UR/0051/65/018/006/1079/1081
535.373

44,55 44,55 45 55 44,55

AUTHORS: Butlar, V. A.; Grebenshchikov, D. M.; Solodunov, V. V.

TITLE: Some features of the kinetics of phosphorescence decay of triphenylene 44,55 21 44,55

SOURCE: Optika i spektroskopiya, v. 18, no. 6, 1965, 1079-1081

TOPIC TAGS: phosphorescence, electron spectrum, line spectrum, molecular spectrum, absorption spectrum

ABSTRACT: The authors investigated the kinetic of quenching of individual quasi lines of the phosphorescence spectrum of triphenylene, obtained by the method of E. V. Shpol'skiy et al. (Usp. Fiz. Nauk v. 80, 255, 1963 and earlier papers). To obtain the quasi-line spectrum, a solution of triphenylene in n-heptane was frozen in quartz by liquid nitrogen and illuminated at a wavelength near 313 nm. The individual lines were separated with a spectrograph (ISB-51) with photoelectric attachment (FEP-1). The decay curve was recorded with

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ACCESSION NR: AP5016183

an oscilloscope. The dependence of the logarithm of the relative intensity on the time was determined from the oscillograms. The phosphorescence-decay curve differs from exponential, and the reason for it is seen in the influence of triplet-triplet absorption, the maximum of which lies in the spectral region where the deviation was observed. The results of the tests show also that all the investigated quasi lines belong to the triphenylene molecule and correspond to transitions from the same triplet level to different vibrational sublevels of the ground state. The partial overlap of the phosphorescence spectrum with the triplet-triplet absorption spectrum is apparently the cause of the retardation of the phosphorescence process during its initial stages. The presence of an intense background may greatly distort the oscillograms showing the phosphorescence decay in the initial stages. The results demonstrate once more that the Shpol'skiy effect makes it possible to increase the information obtainable from luminescence spectra. Orig. art. has: 2 figures

ASSOCIATION: None

Card 2/3

L 2816-66

ACCESSION NR: AP5016183

SUBMITTED:	12Dec64	ENCL:	00	SUB CODE:	OP
NR REF SOV:	003	OTHER:	001		

Card 3/3

L 04819-67 EWP(j)/EWT(m) RM

ACC NR: AP6026981 SOURCE CODE: UR/0051/66/021/002/0250/0252

AUTHOR: Grebenshchikov, D. M.; Butlar, V. A.; Solodunov, V. V.

29

B

ORG: none

TITLE: Phosphorescence of two types of radiating centers of coronene 1 in paraffin solutions

SOURCE: Optika i spektroskopiya, v. 21, no. 2, 1966, 250-252

TOPIC TAGS: phosphorescence, coronene, excited state, luminescence center, HEPTANE

ABSTRACT: The phosphorescence decay of coronone in n-heptane was studied at 77°K on individual quasi-lines (5614 and 5631 Å) in order to determine the lifetime of each radiating center separately. It was found that when the sample is excited with light from a DKSSh-100 xenon lamp through a 313 nm filter, the decay is nonexponential, indicating that the deviation from exponentiality is due to reabsorption of the radiation by triplet molecules. The effect of reabsorption on the phosphorescence decay of coronene is practically constant over the entire spectral range studied (5150-5700 Å). It is shown that two different types of radiating centers formed by coronene molecules in n-heptane at 77°K, whose pure electron transitions are separated by 52 cm^{-1}, have different lifetimes of the excited state which differ by 0.3±0.05 sec. The different lifetimes of the excited states of radiating centers separated in space confirm that the conditions surrounding these molecules affect the electronic

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ACC NR: AP6026981

states of the molecules. In the phosphorescence spectrum of coronene in n-octane, the different distances between the doublet components indicates changes in the vibrational frequencies of the molecule on passing from one radiating center to another. Orig. art. has: 1 figure.

SUB CODE: 20/ SUBM DATE: 01Feb66/ ORIG REF: 010/ OTH REF: 001

Card 2/2 gd

PROCESSES AND PROPERTIES INDEX

The velocity of hydrolysis of chlorine. E. A. Shilov and . M. Solodushenkov. *Compt. rend. acad.* sci. (U. R. S. .) [N. S.], 3, 15–19(1936)(in English); cf. C. A. 29, 103⁹. The rate of the reaction $Cl_2 + H_2O \rightleftharpoons HOCl + {}^+ + Cl^-$ was followed by measuring the cond. For e velocity of reaction between phenol and HOCl the te is independent of phenol concn. and is detd. by the ow reaction of the formation of Cl from HOCl and HCl. his gives another means of detg. the velocity of hydrolysis of Cl_2. The results of the 2 methods agree very well.

Arthur A. Vernon

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

oC

A-1

Tumlirz' equation for alcohol vapour. I. I. Godnev, S. N. Solodushenkov, and M. M. Soboleva (Prom. Org. Chim., 1937, 4, 566—567).—The sp. vol. v of EtOH vapour at pressure P (<5 atm.) is given by $v = RT/P - 0{\cdot}290$. R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

BC

Kinetics of addition of hypochlorous acid to double linkings. V. Formation of αβ-dichloroethane from ethylene and hypochlorous acid at low hydrochloric acid concentrations. E. A. Schilov, S. N. Solodushenkov, and A. N. Kurakin (J. Phys. Chem. Russ., [illegible], 13, [illegible]—766; cf. A., 1938, I, 30).—In aq. HCl C_2H_4 and Cl_2 react to form $(CH_2Cl)_2$ (I) and $Cl\cdot[CH_2]_2\cdot OH$ (II). If [HCl] is >0·006M. the amount of (I) formed is 3·4 mol.-% of that of (II), independent of [HCl]. A similar relation is true for the formation of the chloro-alcohol and dichloride in the reaction of Cl_2 with allyl alcohol. It is inferred that there is a mode of formation of (I) from C_2H_4 and Cl_2 which does not involve the participation of Cl' ions or the direct, non-catalysed union of Cl_2 to the double linking. R. C.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

2

Direct determination of the rate of hydrolysis of chlorine. S. N. Solodushenkov and E. A. Shilov (Chem.-technol. Inst., Ivanovo). *J. Phys. Chem.* (U.S.S.R.) 19, 405-10(1945); *Acta Physicochim. U.R.S.S.* 20, 667-88; cf. *C. A.* 34, 28°.—A stream of H_2O is rapidly mixed with a stream of Cl water contg. 44-70 mg. of Cl per l. and then moves along a glass tube provided with 5 pairs of electrodes. Since hydrolysis of Cl_2 produces H^+ and Cl^-, the elec. cond. of the liquid as detd. by a pair of electrodes is greater the farther this pair is from the mixer. From the cond. between various electrodes and the rate of flow of the liquid the rate v of hydrolysis is calcd. Its main source of error is the impossibility of exactly measuring the distance between the point of complete mixing and the first pair of electrodes. The compressed air driving Cl water must contain the right amt. of Cl_2. The cond. becomes const. at 0° within 1 sec. and at 17° within 0.2 to 0.3 sec. The coeff. of the hydrolysis reaction (of the first order) is 105 min.$^{-1}$ at 0° and 640 min.$^{-1}$ at 17.6°. From this coeff. and the equil. const. the coeff. of the inverse reaction is 7×10^6. The v of the reaction between Cl_2 and NaOH in water is too high for the technique employed. The v of the reaction between HClO and HCl in H_2O is a little higher than that between Cl_2 and water. The temp. coeff. of the elec. cond. of 0.001 *N* – 0.1 *N* HCl between 0° and 3° is 3.4% per degree. J. J. Bikerman

Mechanism of the hydrolysis of trimethyl orthophosphate. E. Blumenthal and J. B. M. Herbert (Univ. Manchester, Engl.). *Trans. Faraday Soc.* 41, 611-17 (1945).—Me_3PO_4 was hydrolyzed in water enriched in heavy oxygen. In alk. soln. the P-OMe bond of the ester is broken, but when the soln. is acid or neutral the O-Me bond breaks preferentially. In autohydrolysis and acid hydrolysis, the d. of the water decreased little during the expt. The heavy-oxygen water used in the expts. had an original excess d. of 100 to 101 parts per million. Victor R. Deitz

ASO-SLA METALLURGICAL LITE

PROCESSES AND PROPERTIES INDEX

BC

Direct determination of the rate of chlorine hydrolysis. E. Schilov and S. Soloduschenkov (*Acta Physicochim. U.R.S.S.*, 1945, **20**, 667—682).—Measurements of the rate of hydrolysis of Cl_2 at ~0° and ~17·5° by the stream method based on the measurement of the electrical conductivity confirm the results previously reported (cf. A., 1936, 1345). The velocity coeff. (*m*) in the kinetic equation $-d[Cl_2]/dt = m[Cl_2] - n[HOCl][H^+][Cl^-]$ = 1·75 and 8·97 mol per l. per sec. at 0° and 17·6° respectively. The velocity coeff. (*n*) of Cl_2 formation from HCl and HOCl = 1·12 × 10⁴ mol per l. per sec. at 0°. Hydrolysis increases rapidly with increase in pH.
C. R. H.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

SOLODUSHENKOV, S. N.

Mbr., Lab. Organic Chem., Ivanovo Chemico-Technological Inst., -1941-47-. "Investigations on the Synthesis of 2-Chlorethanole: I. On the Pseudocatalytic Action of Copper Salts by the Preparation og 2-Chlorethanole," Zhur. Obshch. Khim., 15, Nos. 9-10, 1945; "Direct Determination of the Rate of Chlorine Hydrolysis," Acta Phys. 20, No. 5, 1945; "The Mechanism of Hydrolysis of Chlorine," Zhur. Fiz. Khim., 21, No. 10, 1947.

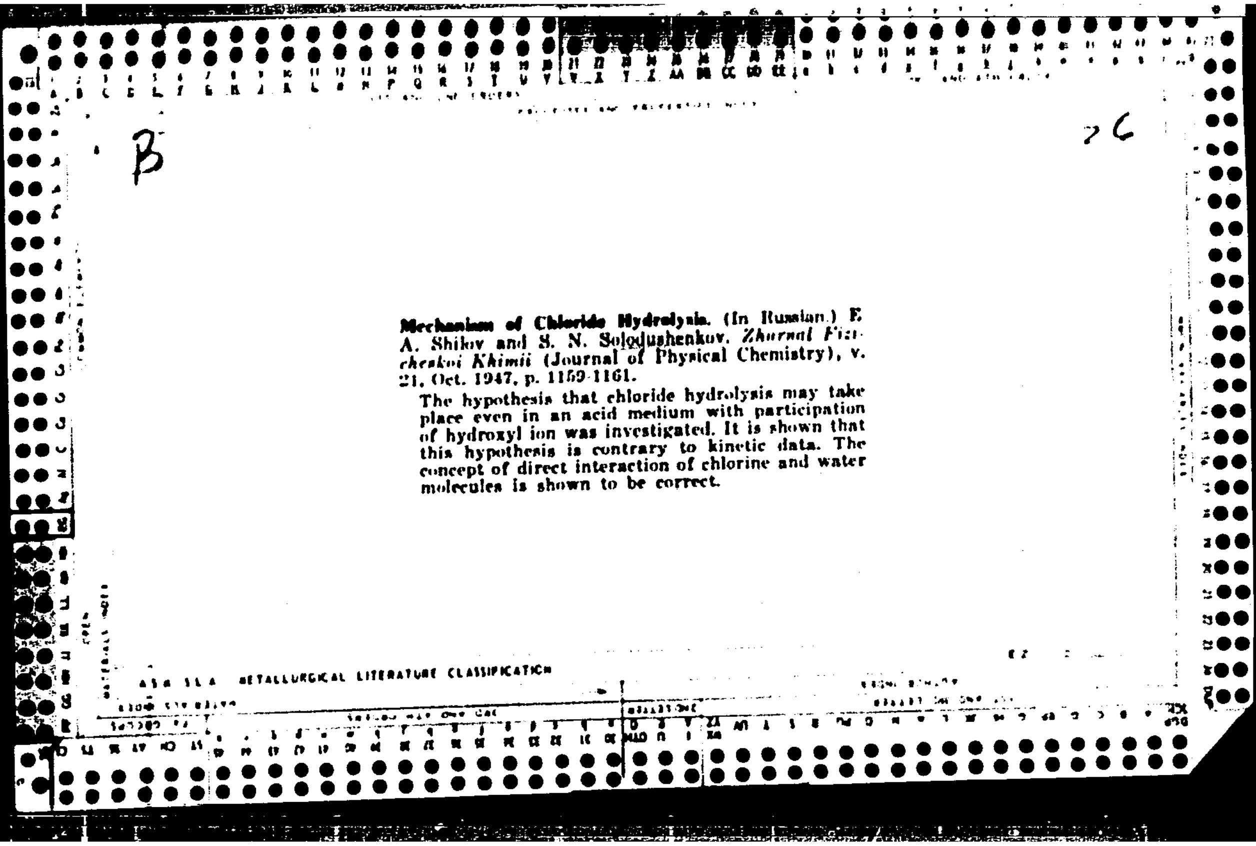
PROCESSES AND PROPERTIES INDEX

Ch

10

Synthesis of 2-chloroethanol. V. Use of higher pressures. K. A. Shilov and S. N. Solodushenkov. *Zhur. Priklad. Khim.* (J. Applied Chem.) 20, 1270-82(1947); *cf. C.A.* 43, 119e.—Reaction of C_2H_4, compressed to 20-40 atm., with a suspension of Cl_2 hydrate in H_2O, gives, at Cl_2 concns. up to 1 mole/l., solns. of 0.85-0.95 mole/l. CH_2ClCH_2OH, with an 80-88% yield of the theory, or 90-98% of the max. yield possible on account of the formation of $(CH_2Cl)_2$ in the homogeneous soln. Increase of the initial concn. of Cl_2 to 1.5 moles/l. results in a sharp drop of the yield. The yield, and the final concn. of the product, can be increased substantially by repeated satn. with Cl_2 without exceeding an initial Cl_2 concn. of 1 mole/l.; in this way, a final concn. of 1.65 moles/l. was obtained, with a 73% yield. The reaction is best carried out at 0-2°; at 10-15°, the yield is somewhat lower. Decrease of the pressure to 5-2 atm. lowers the yield somewhat. The presence of liquid $C_2H_4Cl_2$ is unfavorable. The intensity of stirring has little effect on the final yield but is detg. for the rate of satn. of the suspension with C_2H_4. N. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



B

2C

Mechanism of Chloride Hydrolysis. (In Russian.) E. A. Shikov and S. N. Solodushenkov. *Zhurnal Fizicheskoi Khimii* (Journal of Physical Chemistry), v. 21, Oct. 1947, p. 1159-1161.

The hypothesis that chloride hydrolysis may take place even in an acid medium with participation of hydroxyl ion was investigated. It is shown that this hypothesis is contrary to kinetic data. The concept of direct interaction of chlorine and water molecules is shown to be correct.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

SOLODUSHENKOV, S. N. Cand. Tech. Sci.

Dissertation: "Synthesis of 2-Chlorethand from Water and Ethylene."

28 Apr. 49

Inst. of Petroleum, Acad. Sci. USSR

SO Vechernyaya Moskva
Sum 71

NKOV, S. N.

Synthesis and uses of carbanilide derivatives. VI. Preparation of symmetrical 4,4'-dinitrocarbanilides. A. A. Spryskov, S. N. Solodushenkov, and V. N. Kislov (Chem. Technol. Inst., Ivanovo). Zhur. Priklad. Khim. 38, 1065

[illegible]

gave 4,4'-dinitro-2,2'-dichlorocarb[illegible]

pyridine [illegible]

$COCl_2$ through [illegible]

[illegible]

alky[illegible] gave [illegible] 2,2'-[illegible]

4,4'-dinitro[illegible] m. 270° (decomp.)

Solodushenkov, S.N.

Synthesis and uses of carbanilide derivatives. II. Synthesis of some nitro- and aminocarbanilides. S. N. Solodushenkov, V. N. Klyuev, and A. A. Sprykov (Chem.-Technol. Inst., Ivanovo). *Zhur. Priklad. Khim.* 30, 1361-7 (1957); cf. *C.A.* 52, 281g.—Sym. and unsym. substituted mono- and dinitrocarbanilides were synthesized from *2-methoxy-4-nitrophenyl isocyanate* (I) and aminocarbanilides from Ac derivs. of *p*-phenylenediamine and from aminoazobenzene. Bubbling $COCl_2$ 4-6 hrs. through a soln. (40-5°) of 34 g. 2-methoxy-4-nitroaniline (II) in 600 ml. dry PhMe contg. 21 g. Na_2CO_3 gave 56% I, m. 114.5-15° (dry PhMe). Derivs. of 2,2'-dimethoxycarbanilide were synthesized by refluxing 30 min. PhMe solns. of equiv. amts. of I and II giving on cooling *4,4'-$(NO_2)_2$ deriv.*, m. 275°; refluxing I 1-1.5 hrs. in PhMe with an equiv. amt. of *o*-anisidine pptd. on cooling *4-NO_2 deriv.*, m. 203.5° (80% AcOH). A hot soln. of I in PhMe added slowly to a PhMe soln. contg. equiv. amts. of 2,4-dimethoxy-4-aminotoluene and refluxed 30-40 min. gave on cooling green-yellow leaflets of *4-nitro-2,2',4-trimethoxy-5'-methylcarbanilide* (about 100%), m. 211° (80% AcOH). Acetylation of 2-chloro-4-nitroaniline followed by reduction with cast iron filings at 75° yielded 90% *N'*-acetyl-2-chloro-1,4-phenylenediamine, m. 133°, which in aq. NaOAc reacted with $COCl_2$ at 30-5° yielding 94-5% *4,4'-diacetamido-3,3'-dichlorocarbanilide* (III), m. 299.5° (glacial AcOH). III is subject to several types of hydrolysis. Different conditions were investigated. Hydrolyzed 7 hrs. in 50% H_2SO_4 at 77° III gave 86% *4,4'-$(H_2N)_2$ deriv.*, m. about 247° (decompn.). Acetylation of II followed by reduction gave 2-methoxy-*N'*-acetyl-1,4-phenylenediamine which in Na_2CO_3 soln. reacted with $COCl_2$

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4E4j

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SOLOPUSHENKOV, S. N; KLYUEV, V. N; SPRYSKOV, A. A.

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yielding practically 100% *4,4'-diacetamido-3,3'-dimethoxycarbanilide* (IV), m. 251.5-3° (dil. AcOH). Hydrolysis of IV in hot HCl (1:1) gave on cooling the HCl salt of the *4,4'-$(H_2N)_2$ deriv.*, m. 228° (decompn.). The base, m. 191°, was pptd. from a warm soln. of the salt with NH_4OH. Acetylation, nitration, and reduction of 2-methoxy-5-chloroaniline gave *N'*-acetyl-2-methoxy-5-chloro-1,4-phenylenediamine, m. 150-3°, which with $COCl_2$ at 35-40° gave 81% *4,4'-diacetamido-2,2'-dichloro-5,5'-dimethoxycarbanilide*, m. 221.5-2.5° (pyridine). This hydrolyzed 10-15 min. in boiling 20% HCl gave the *4,4'-$(H_2N)_2$ deriv.*, distd. without m. 315°. Aminoazobenzene in C_6H_6 with $COCl_2$ yielded 82.7% bis(azo dye), m. 258° (decompn.); on reduction and steam distn. 87% 4,4'-diaminocarbanilide was obtained, did not m. 315°.

I. Bencowitz

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SOLOBUSHENKOV, S. N.

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Synthesis and uses of carbanilide derivatives. III.
Preparation of aminocarbanilides. 7 V. N. Klyuev, A. A.
Sorvakov, and B. N. Solodu[redacted]enkov (Chem.-Technol.
Inst., Ivanovo). Zhur. 0, 1872-7(1957);
cf. C.A. 52, 6321e.—Twelve new amino carbanilides were
synthesized by reduction of the nitrocarbanilides previously
prepd. (*loc. cit.*) with Zn dust in HCl and with Fe in AcOH.
To a mixt. of the nitro deriv. and aq. EtOH, concd. HCl
was added and then Zn dust over a period of several hrs.
The following diamino derivs. were thus obtained from the
corresponding dinitro compds.: *4,4'-diamino-2,2',5,5'-*
tetramethylcarbanilide, yield 48.5%, not melting up to 315°;
4,4'-diamino-2,2'-dimethyl-5,5'-dichlorocarbanilide, yield
63.5%, not melting up to 315°; *4,4'-diamino-2,2'-diethoxy-*
5,5'-dimethylcarbanilide, m. 184° (50% EtOH)(decompn.);
4,4'-diamino-2,2'5,5'-tetraethoxycarbanilide, yield 80%, m.
199° (EtOH). The following derivs. were prepd. by addg.
gradually the corresponding nitro derivs. to a mixt. of Fe
shavings and aq. AcOH, previously digested 1 hr. with
stirring at 90-5°, and continuing the digestion at this temp.
for several hrs.: *4,4'-diamino-2,2'-dichlorocarbanilide*, m.
287°; *4,4'-diamino-2,2'-dimethoxycarbanilide*, yield 50-60%,
m. 192°; *4,4'-diamino-2,2'5,5'-tetramethoxycarbanilide*, yield
45-50%, m. 236° (C_6H_6); *4,4'-diamino-2,2'dimethoxy-5,5'-*
dimethylcarbanilide, yield 80%, m. 230° (MeOH)(de-
compn.); *4,4'-diamino-2,2'-dimethoxy-5,5'-dichlorocarbanil-*
ide, yield 70%, m. 254-6° (MeOH); *4-amino-2,2'4'-tri-*
methoxy-5'-methylcarbanilide, yield 82%, m. 175°; *4,4'-*
diamino-2,2'5,5'-tetrachlorocarbanilide, yield 61%, not melt-
ing up to 315° (the latter compd. was also obtained in a 58%
yield by refluxing the nitro deriv. with Na_2S 1-1.5 hrs.);
4-amino-2,2'-dimethoxycarbanilide, yield 20-25%, m. 166°
(EtOH).

Distr: 4E4j/4E2c(j)

I. Bencowitz

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KLYUYEV, V.N.; DOGADKINA, L.A.; SOLODUSHENKO, S.N.; SPRYSKOV, A.A.

Azo dyes from amino carbanilide, and its substitutes. Zhur. prikl. khim. 31 no.1:124-129 Ja '58. (MIRA 11:4)

1. Ivanovskiy khimiko-tekhnologicheskiy institut.
(Azo dyes) (Carbanilide)